

ABSTRACT OF THE INVENTION

An outer air seal assembly for use around rotating fluid guide components, such as rotating blades within a turbine engine, is disclosed. The seal includes features that reduce radially-directed leakage while increasing operational life of the seal and providing additional turbine section cooling without reducing engine performance. The seal employs boundary members that cooperatively prevent leakage within the turbine section of an associated gas turbine engine. The boundary members are spaced apart by interface gaps having radially-skewed portions that protect blocking panels disposed within the gap and extends the life of seal. The interface gap may also include a radially-aligned portion, and partition members may extend into the gap to form a flow-slowing serpentine-shaped pathway within the gap. Conduits disposed within the boundary members allow cooling fluid to enter the interface gap, providing supplemental cooling benefits without reducing engine operating efficiency. Multiple sets of boundary members may be used in an axially-extending orientation, with interface gaps being disposed between boundary members of each set.